

Winter Flying-fox Colonies in Southern NSW

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Australia's flying foxes belong to the Family Pteropodidae, an almost exclusive tropical family distributed from Samoa to western Africa. Tropical fruits produced year round in the steamy rainforests are the main source of food for these animals and so, unlike the insectivorous Microchiropterans, they rarely colonise the cooler temperate latitudes.

In Australia Flying Foxes have been able to exploit Eucalyptus flowers as a main source of food and as a result are found far further south than is usual for members of the Pteropodidae. Of the four species of Flying-fox found in Australia, one, the Spectacled Flying-fox, *Pteropus conspicillatus*, is tropical and confined to northern Queensland, while the Black Flying-fox, *Pteropus alecto* is mainly tropical but can be found as far south as Grafton in New South Wales. The Little Red Flying-fox, *Pteropus scapulatus*, is found south as far as Victoria

and in the arid zone where it follows the erratic flowering of the river gums (e.g. *Eucalyptus camaldulensis*). The Grey-headed Flying-fox, *Pteropus poliocephalus*, which has the most southerly distribution, has been found on the islands in the Tasman.

The southerly range of these animals has only been recorded for summer. It has been known for some time that the Grey-headed Flying-fox forms summer colonies between September and April at various sites throughout the eastern coastal regions of Australia. A summer colony in the Sydney suburb of Gordon contains 20-30,000 bats. In winter most of these sites are deserted and the few animals that have been observed to overwinter have been described (Nelson 1965) as being mostly juveniles with a few adult males (the extension of the group Nelson called the "juvenile pack" within the summer camp). The bulk of the breeding population disappear from April to September, when once again they return to the summer colony sites for breeding and mating.

It has long been assumed that the majority of the population of the Grey-headed Flying-fox migrated north in the winter to the warmer and more food abundant areas of North Queensland (Ratcliffe 1931). Although in 1965 Nelson, after finding a couple of winter camps in southern Queensland, suggested that the rest of the colony might spread out to forage further afield individually or in small groups that defy detection.

Since 1981 it has been known that the Gordon colony in Sydney has had a proportion of its summer camp in residence all year around (Puddicombe 1981) and, for most of the time in 1985 at least, it has not had the composition of a juvenile pack.

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BAT WATCH Flying Fox Survey

The Royal Zoological Society of NSW is initiating a survey and study of Flying Foxes in NSW. Information is needed from all parts of the state. If you are interested either in helping with field observations or in the organization of the survey please send your name, address and phone number, to:

BAT WATCH, Royal Zoological Society of NSW, P.O. Box 20, Mosman, NSW 2088

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Also this year two large colonies were observed on the South Coast of New South Wales during winter. Both these colonies contained adults and juveniles of both sexes. The first of these colonies (drawn to my attention by C. Tidemann) was in residence at Cockwhy Creek (Lat. 35°31'30"S, Long. 150°18'E) from April to late June 1985. From local reports this colony has been at this site at approximately this time for most of the last 40 years at least.

I found a second colony at Yattheyatta (Lat. 35°15'20"S, Long. 150°25'E) in a small subtropical rainforested valley surrounded by cleared farmland. The colony had arrived there sometime in late June and stayed until early September. I attempted to count the bats as they flew out of the valley on the nights of 12 and 13 July 1985 and came to the conservative estimate of 100,000 animals.

Considering the departure time from Cockwhy Creek and the arrival time at Yattheyatta it is very tempting to speculate that these two colonies are one and the same.

The large numbers at the Yattheyatta camp further suggest that it is composed of a number of summer colonies which coalesce into this very large winter colony, which itself may move around in a manner determined by the availability of food in any particular year within the South Coast region. Of course in the 'average' year these movements would have a pattern as traditional sites are occupied and deserted in time with the blossoming of certain key species of trees, such as the winter flowering Spotted Gum, *E. maculata*, which blossomed so profusely on the South Coast this year.

Having, in this report, established the presence of large winter colonies of *Pteropus poliocephalus* south of Sydney, studies of the movements of individuals and the composition of colonies are needed. Banding and radio-tracking projects are planned and the **Bat Watch** programme of the Royal Zoological Society is underway.

REFERENCES

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Wedge-tailed Eagle — Monarch of High Places

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It is sad to see what we are doing to our wildlife and our wilderness. Man and his greed is ruining our world, and though I disagree with some of the actions taken by our conservationists and their followers, they do have a valid concern behind their reasoning. I in my own small way contributed to the final protection of the Eagle Hawk, or the Wedge-tailed Eagle *Aquila audax*. In the years 1957-1974 I was responsible for working on the problems of low lambing levels in South-west and Western Queensland, and the neo-natal mortalities in lambs. It is a long story, and I became involved personally, politically and by research, into the awful slaughter of the Wedge-tailed Eagle at lambing time. In 1963 after 3 000 of these eagles had been shot or trapped on five Merino Studs in my region, I wrote a paper, and said that from my findings, I could see no evidence that the eagle caused all the low lambings in my district. Boy did that set the cat amongst the pigeons, and I was told to **shut up**.

However, I continued my lambing research work, and at the same time quietly jotted down evidence I collected, camera slides and data, for the next ten years. I climbed trees and studied eagle-nests year by year. I tagged young birds, to give me some indication of their movement, and some were trapped a year later as far as 200 miles away. I watched what they ate, and studied the bones of fresh and old material in unoccupied, and occupied nests. (The last named caused me some real concern, and bloody awful fear miles away from help. Idiot I be?).

In 1969, I went to a Refresher School in Canberra. CSIRO Wildlife was there with their big guns. It is a strange thing in life, but scientists keep things to themselves.